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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/766,633	01/27/2004	Richard William Worrall	WORRALL - SHARP	3766

7590 11/02/2006  
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EXAMINER

RUSSELL, CHRISTINA MARIE

ART UNIT	PAPER NUMBER
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2837

DATE MAILED: 11/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/766,633

Applicant(s)

WORRALL ET AL.

Examiner

Christina Russell

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 2-7, 9-19 and 21-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-7, 9-19 and 21-23 is/are rejected.
- 7) ☒ Claim(s) 21 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                               | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                      | 5) <input type="checkbox"/> Notice of Informal Patent Application                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____  |

## **DETAILED ACTION**

The cancellation of claims 1, 8, and 20 has been accepted.

### ***Claim Objections***

1. Claim 21 is objected to because of the following informalities:
2. Claim 21 is very repetitive in language. A memory is claimed, which is able to store digital musical data, and then in step d, storing of digital musical data in a memory is claimed again. This occurs throughout claim 21. A means of inputting a musical composition, a means for digitizing a musical composition, a means for identifying and calculating all strokes and stroke groups, and a means for outputting the fingering information are all recited in step a, and then reiterated again in the following steps. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 3, 5, 6, and 21-23 are rejected under 35 U.S.C. 102(b) as being anticipated by the US patent to Rogers (6,080,925).
3. In terms of independent claim 21, Rogers teaches a method for determining the correct and appropriate fingering for a given musical instrument comprising a memory or storage device, and inputting means, an output means and a means for calculating the optimum and alternate fingering, or strokes and stroke groups performed by the user during fingering, of different musical data for an interested party (see column 2, lines 3-9, 18-22, 38-40, 57-64, column 3, lines 51-52, column 4, lines 44-49, column 5, lines 62-65, column 8, lines 27-42, and column 8, line 57 – column 9, line 44).
4. As for claim 3, Rogers teaches the said fingering information displayed as tablature information (see column 6, lines 28-38 and column 8, lines 45-50).
5. As for claims 5 and 6, Rogers teaches the said alternate fingering as easier to perform for the use in such performances as solos and the alternate fingering is such that it provides the ability to perform in a preferred tonal style as designated by the soloist and his particular preferences (see column 2, lines 38-41, column 4, lines 39-49 and column 7, lines 19-20).
6. As for claims 22 and 23, the same logic used to reject claim 21 can be used here. Rogers teaches a machine, that performs the method from claim 1, that comprises a memory or storage, input and output means and a processor for calculating the different fingerings from strokes and stroke groups corresponding to the fret and string position information stored in memory, for an interested party or musician, to be

performed on a musical instrument (see references made above and column 2, lines 56-64).

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 2 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rogers in view of the US patent to Hesnan (5,639,977).

9. In terms of claim 2, Rogers teaches all of the claimed elements, as disclosed above relating to claim 21, except for said fingering information comprising of which finger should be placed where. Hesnan teaches a tablature fingering information display with additional finger position indicators (see column 6, lines 15-21). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to incorporate numbers into the already present circles displayed on the large 12 fret display screen of Rogers representing the recommended fingers to use in each position.

10. In terms of claim 4, Rogers teaches all of the claimed elements, as disclosed above relating to claim 21, except for the recommended or optimum fingering movement being minimized or easier for those musicians at the beginner level. Hesnan teaches such convenience for beginners (see column 5, lines 24-48). It would have

been obvious to one of ordinary skill in the art, at the time of the invention, to narrow down the chord and scale display of Rogers to make it simpler for those just starting to play to use the device to find the fingerings that are most appropriate for their skill level.

11. Claims 7, 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rogers in view of the US patent application publication to Sitrick et al. (2003/0110925).

12. In terms of claim 7, 13 and 14, Rogers teaches all of the claimed elements, as disclosed above relating to claim 21, except for the input means being either a musical score or musical piece, a scanner to scan in a paper copy of a musical piece, or a microphone to capture sounds and convert them to digital data. Sitrick et al. does provide input means for all three of these devices (see figure 2, page 1, paragraph 10, page 4, paragraph 53 and page 11, paragraph 99). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to incorporate additional input means into the available input ports of the device to Rogers.

13. Claim 7 is also rejected under 35 U.S.C. 103(a) as being unpatentable over Rogers in view of the US patent to Michero (6,331,668).

14. Rogers teaches all of the claimed elements, as disclosed above relating to claim 21, except for the inputted data comprises of tablature information. Michero provides this type of input in his similar musical reference device (see column 5, line 61 – column 6, line 4). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to again incorporate this type of input into the similar reference device of Rogers and configure one of his dials to handle such input.

15. Claims 9-12, 15, 16 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rogers in view of the US patent to Fukada (6,107,557).

16. In terms of claim 9-12, Rogers teaches all of the claimed elements, as disclosed above relating to claim 21, except for the input means being a data storage device, a computer network, a MIDI device or a CPU program. Fukada teaches all of these input means in his related chord display device (see column 1, line 61 - column 2, line 3, column 9, lines 2-5, 8-11, and 30-43). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to again incorporate these types of inputs into the similar display device of Rogers and configure one of his dials to handle such input means.

17. In terms of claim 15, 16 and 19, Rogers teaches all of the claimed elements, as disclosed above relating to claim 21, except for the output means of the device being a data storage device, a computer network or a performance of the displayed fingering information. Fukada teaches, in relation to his input devices, the reverse use of his storage device and computer network, in addition to the ability to perform the given outputted data (see column 1, lines 48-50, column 2, lines 7-11, 27-30 and column 9, lines 30-35). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to incorporate such output means into the similar display device of Rogers, by integrating them into the available output pins. Also, it would be obvious that if data can be inputted from a data storage device or a network that that data can therefore be outputted back into those devices.

18. Claims 17 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rogers in view of the US patent to Tice et al. (6,751,439).

19. Rogers teaches all of the claimed elements, as disclosed above relating to claim 21, except for the output means as either a printer or computer monitor. Tice et al. provides this type of output means in a similar musical teaching device (see Figure 1 and column 4, lines 6-10). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to again incorporate these types of output devices into the similar teaching device of Rogers. It would have been obvious to use the display means, or monitor, of a personal computer to display the resulting data instead of a smaller LCD screen by linking Rogers processor through one of the output pins and also to print the displayed data by again linking Rogers device to a printing means through an output pin.

### ***Response to Arguments***

20. Applicant is correct in assuming that the US patent documents presented on the IDS were considered, and that the NPL, or Non Patent Literature copyrighted document was not. If the applicant wishes for this document to be considered a copy of the document must be submitted.



21. Applicant's arguments filed 4/26/2006 have been fully considered but they are not persuasive.

22. The applicant argues that the present invention requires no user information, however the claims to do specifically state that the user cannot input information. The user, as taught by Rogers, merely positions dials and switches, but the processor identifies the appropriate fingerings.

23. The applicant argues that Rogers does not provide a "performance-ready" output, however the applicant later states in his arguments that Rogers' device provides for an improvised solo. A performance-ready output can be interpreted as musical data outputted at a moments notice for a spontaneous or impromptu performance. A solo by definition is a performance by a single person.

24. The applicant argues that Rogers does not store the fingering information for display at a later time. Rogers provides ROM, which stores fret and string positions for easy lookup and quick display of fingerings. Also, applicant states in claims 21 and 22 that "the fingering information can be published, stored **OR** used to perform the musical piece". Therefore, as the claim is written, storing the fingering information for a later use is not necessary.

25. Applicant further argues that Rogers does not provide a means for digitizing the musical data. However, to digitize music means to assign or translate the data into a binary code, which Rogers' device with processor does (see column 8, line 57 – column 9, line 44).

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26. Lastly, in response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the addition of numbers to indicate fingers, the narrowing of the display to minimize hand movement by limiting the frets, and inputting and outputting by additional means through the already present input and output ports and pins, are all obvious modifications and known in the art. In addition to the references provided, tutoring books available to the public provide numbers to indicate the recommended fingers, to minimize hand movements it is obvious to center the fingerings around a limited number of frets, and lastly an input and output port can be connected to multiple means which can be seen throughout the art, therefore all these modifications and additions to Rogers device are obvious.

***Conclusion***

27. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

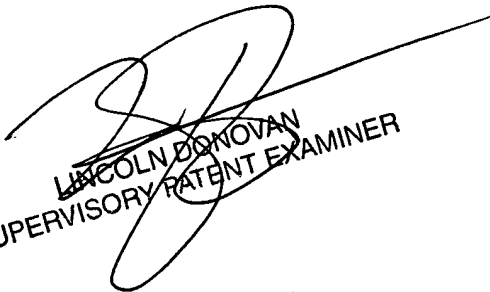
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christina Russell whose telephone number is 571-272-4350. The examiner can normally be reached on Mon-Fri, 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lincoln Donovan can be reached on 571-272-1988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CR  
10/27/2006

  
LINCOLN DONOVAN  
SUPERVISORY PATENT EXAMINER